# BALANCING NATURAL GAS POLICY

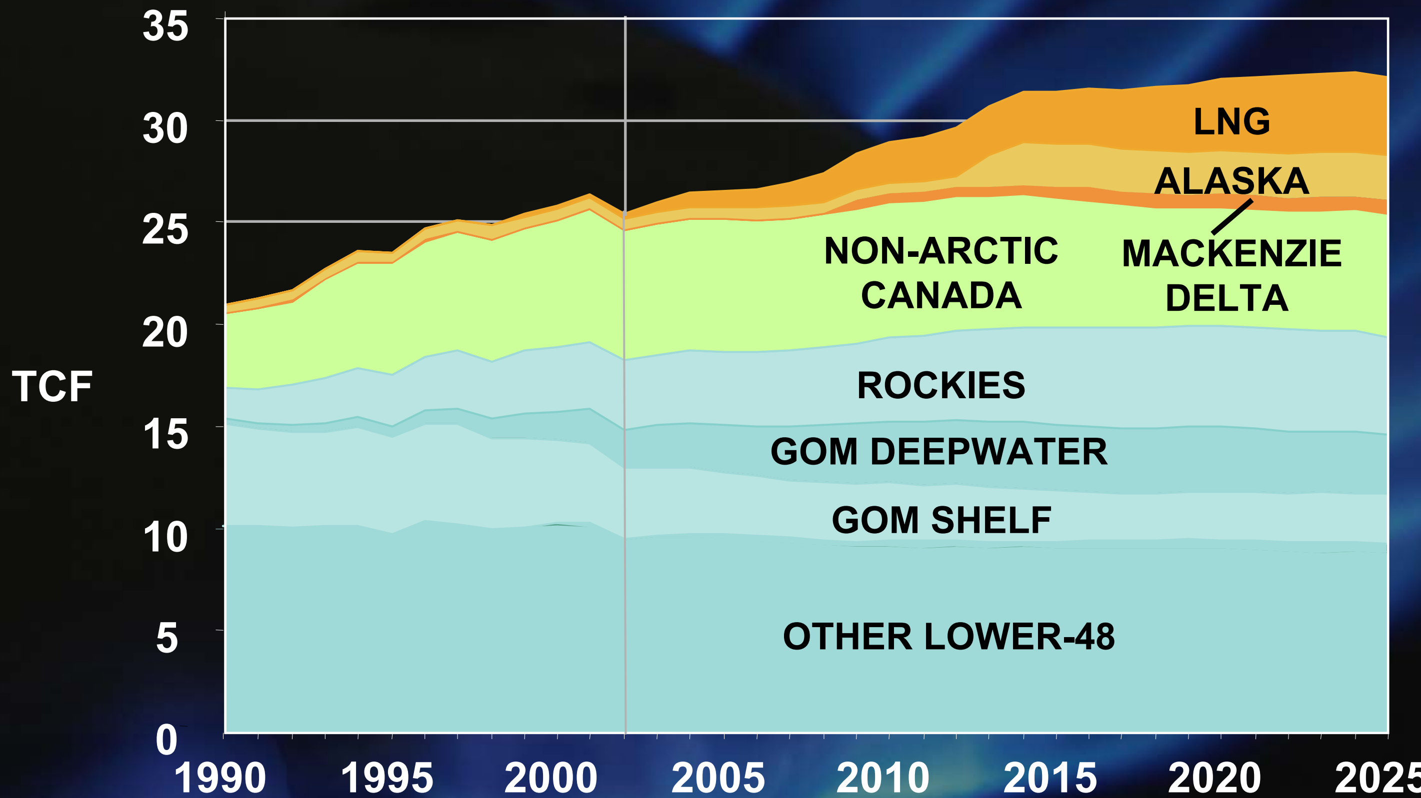
## Fueling the Demands of a Growing Economy

## National Petroleum Council Presentation to CPUC/CEC Natural Gas Workshop

December 9, 2003

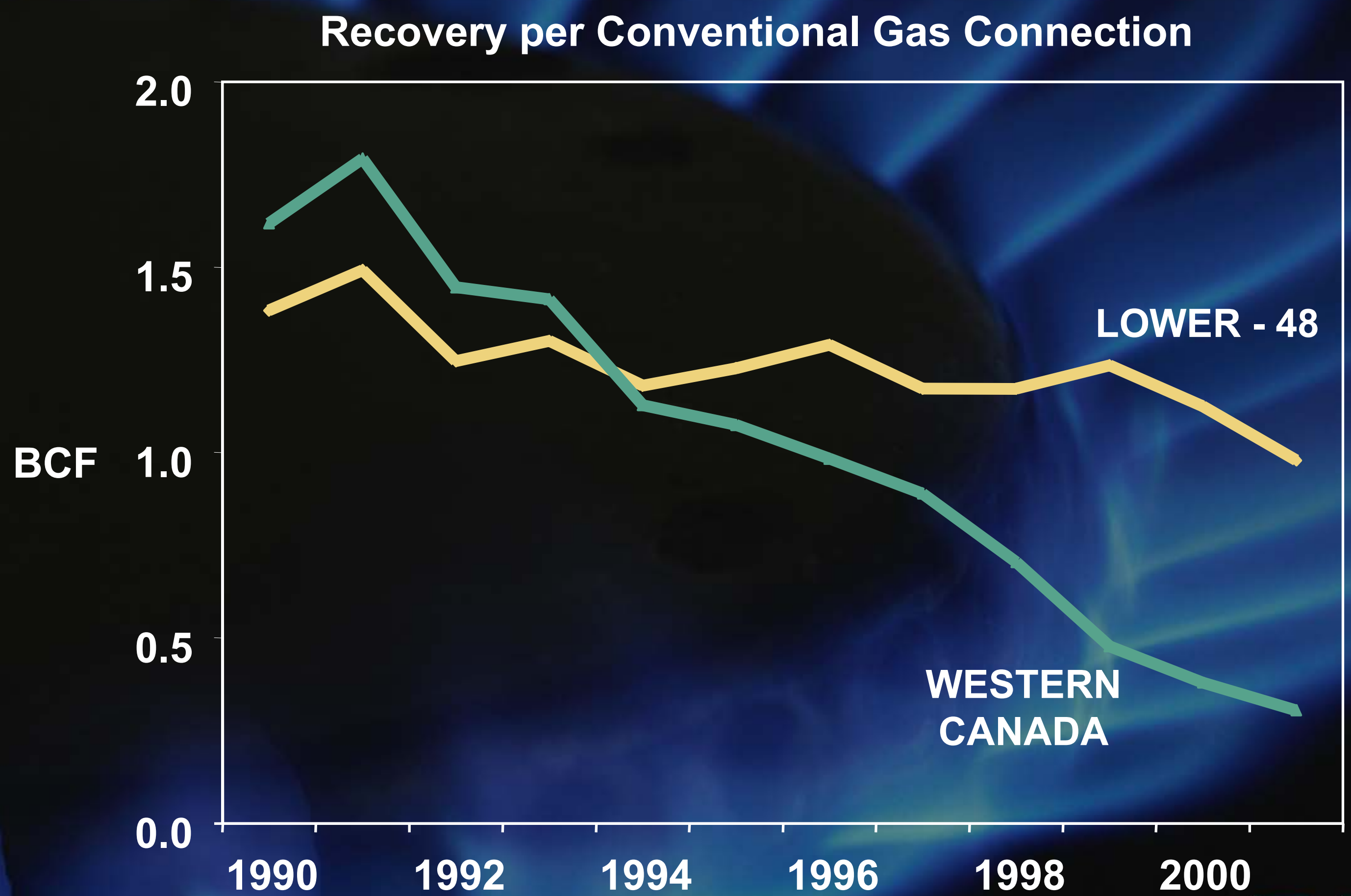
NPC

# Future Supplies Come from Traditional and New Sources




NPC

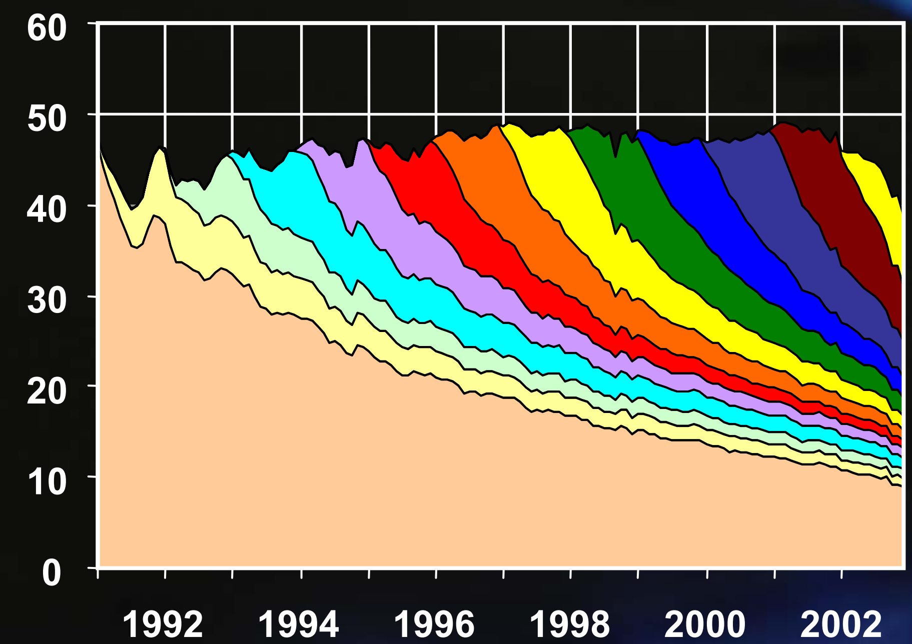
# Production History Confirms a Maturing Resource Base




NPC

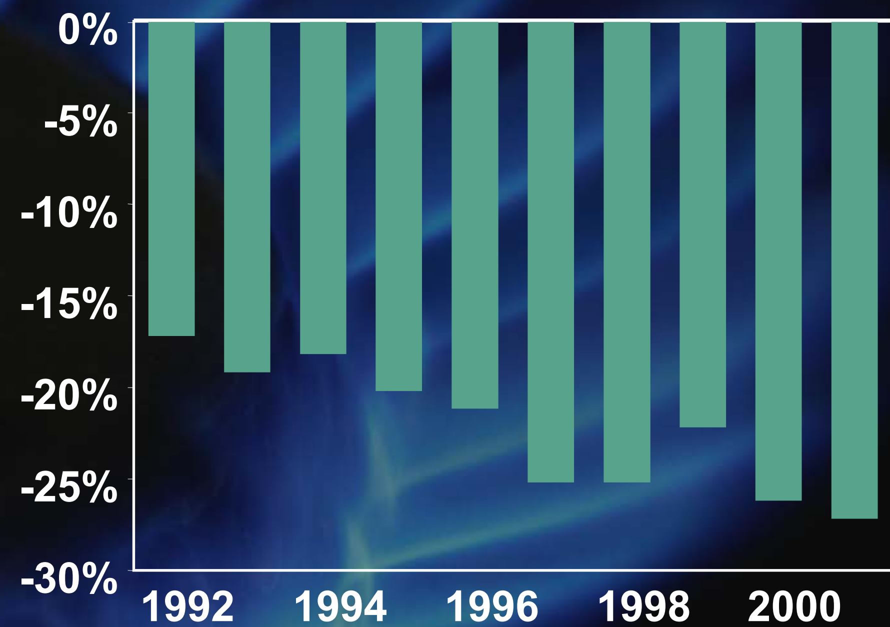
# The Rate of Production Decline is Increasing

Lower - 48 Wet Gas Production from Gas Wells, by Year of Production Start

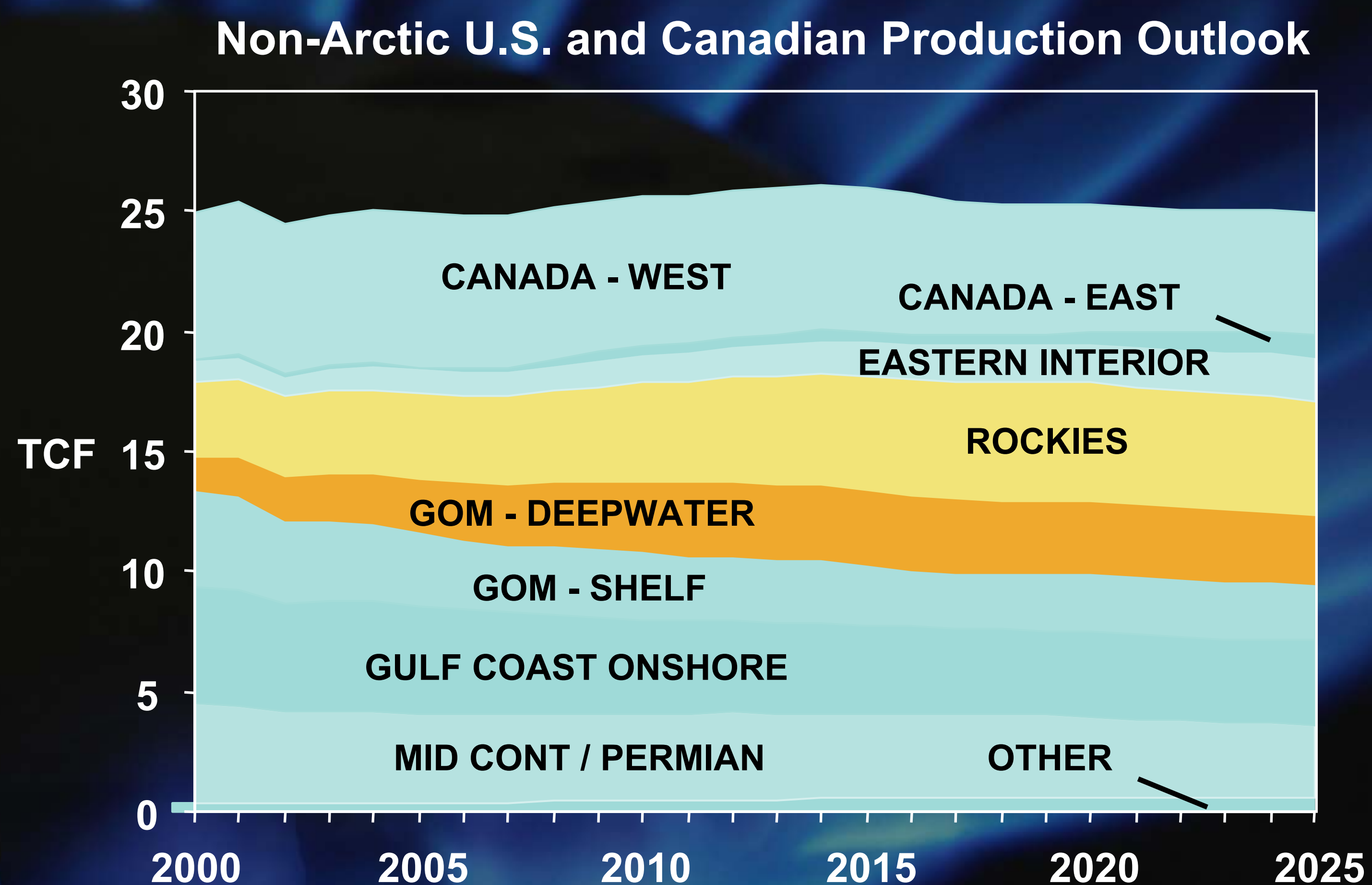



Source: Base data from IHS

Lower - 48 Decline Rate From Existing Wells

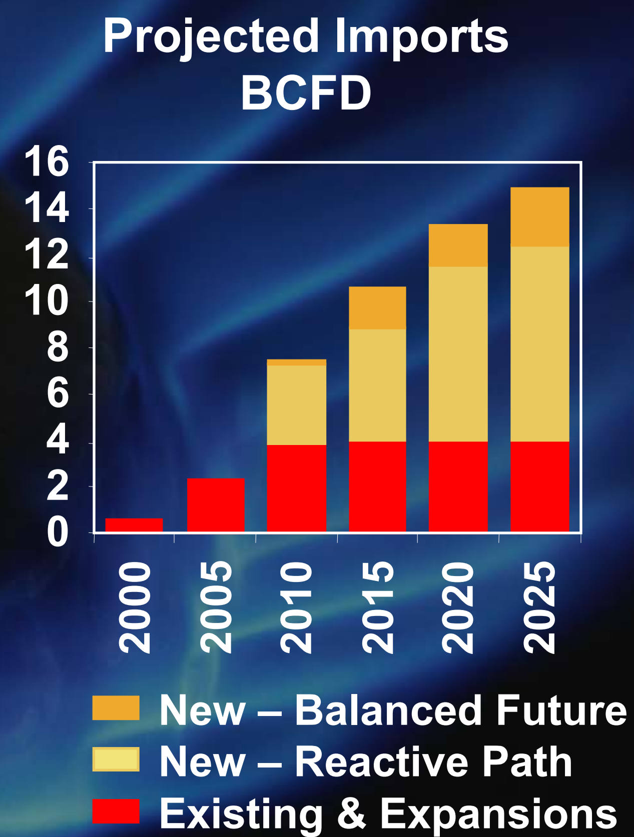


# Rockies and Deepwater Gulf of Mexico Production Must Grow



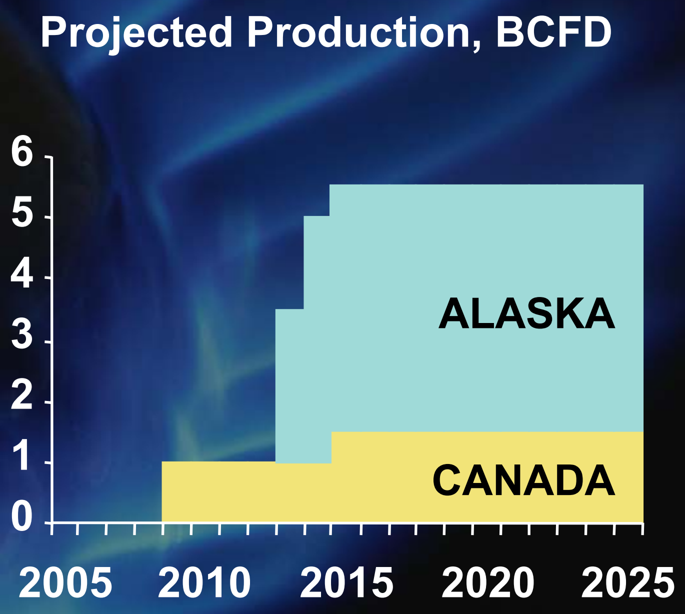

NPC

# LNG Imports Are Needed, But Face Obstacles


NPC

# Arctic Pipeline Projects Can Deliver Important New Supplies

# Back-Up

# The Supply Task Group Approach Was Comprehensive

- Conduct a review of the North American resource base
- Analyze historical production performance
- Evaluate new supply sources (LNG, Arctic)
- Consider effects of advancing technology and regulatory environment
- Focus on production outlook

NPC

# Findings on Natural Gas Supply

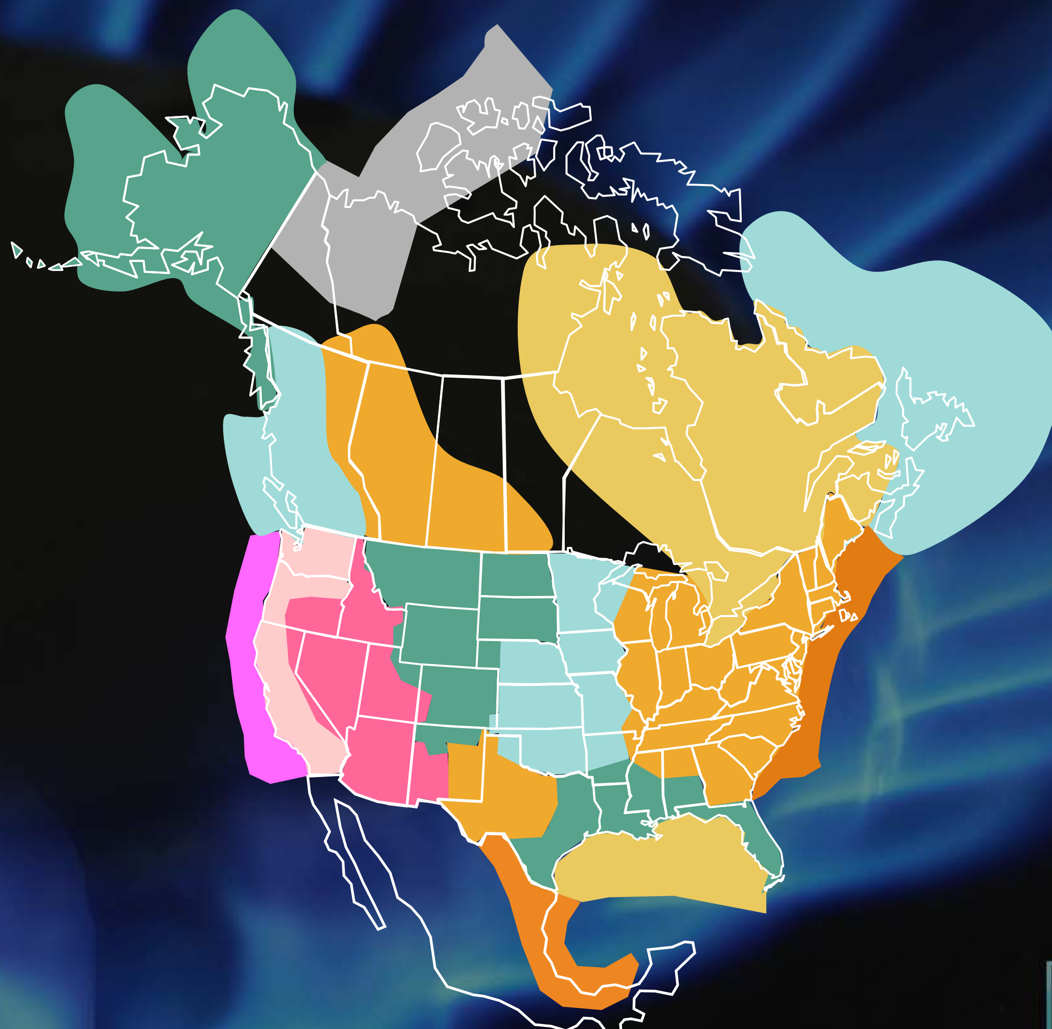
Traditional North American producing areas will provide 75% of long-term U.S. gas needs, but will be unable to meet projected demand

Increased access to U.S. resources (excluding designated wilderness areas and national parks) could save consumers $300 billion in natural gas costs over the next 20 years

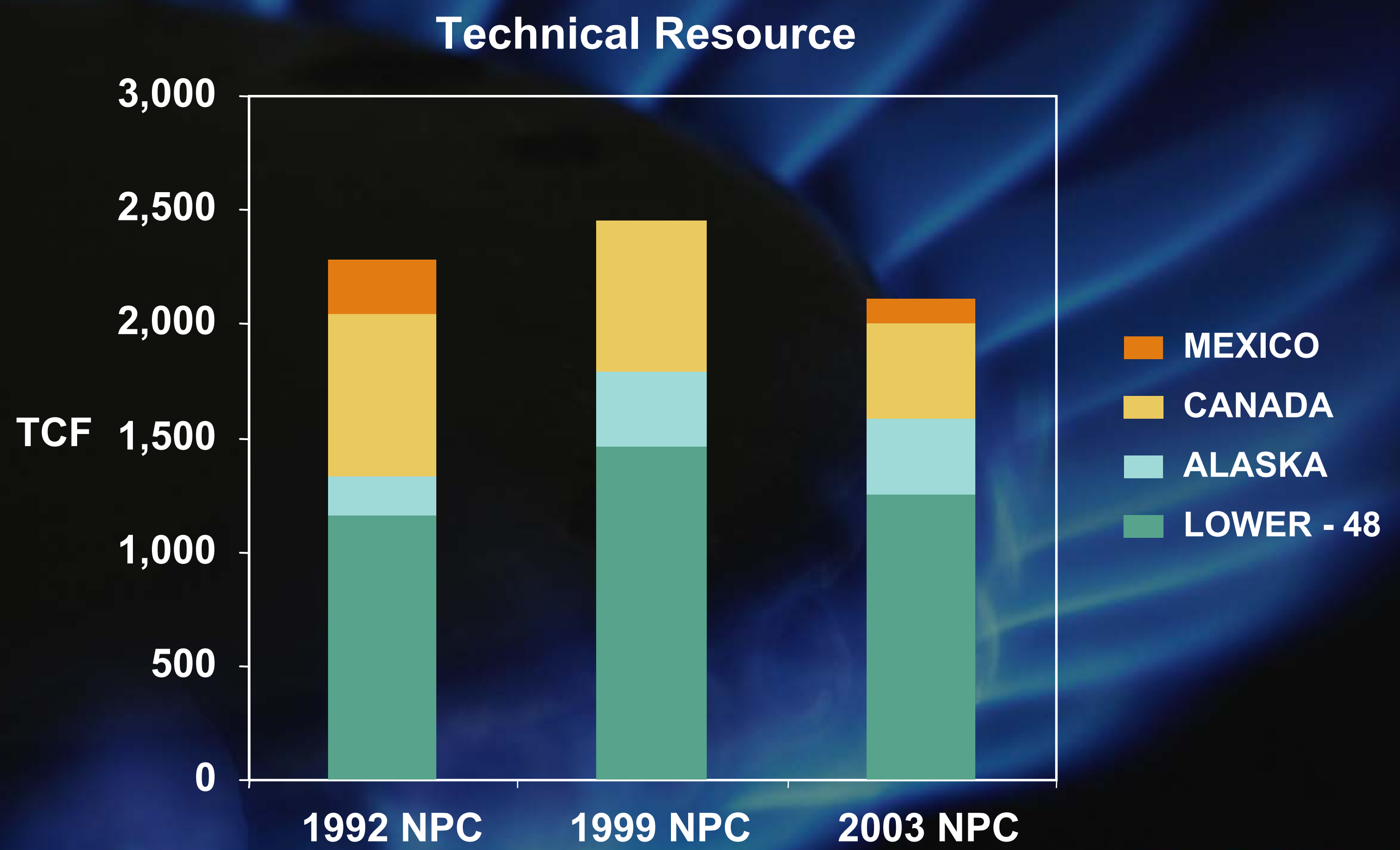
New, large-scale resources such as LNG and Arctic gas are available and could meet 20-25% of demand, but are higher-cost, have longer lead times, and face major barriers to development

NPC

# North American Resource Base is Large and Diverse

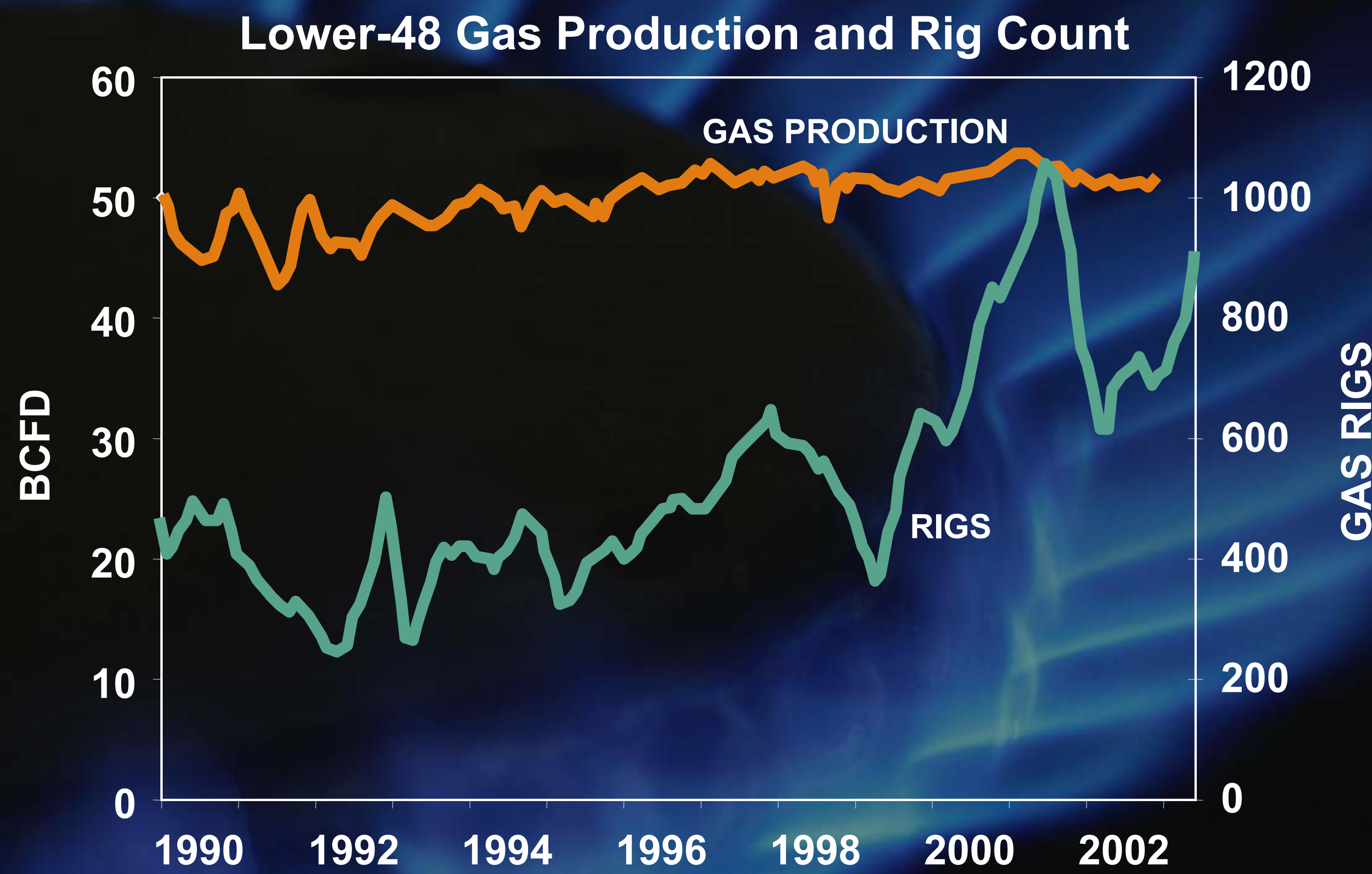


# North American Resource Base Was Comprehensively Reviewed



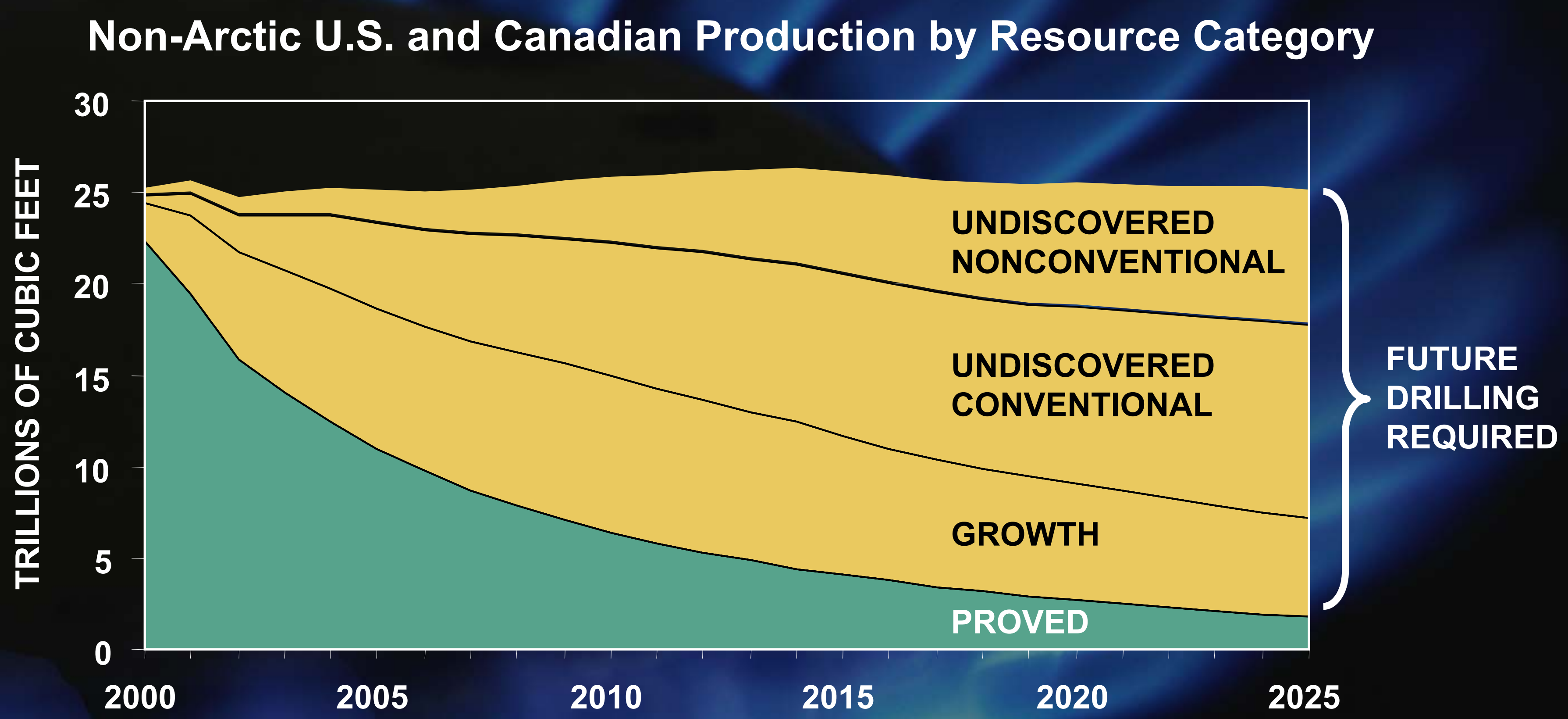

NPC

# Production Response from Increased Drilling Has Been Modest



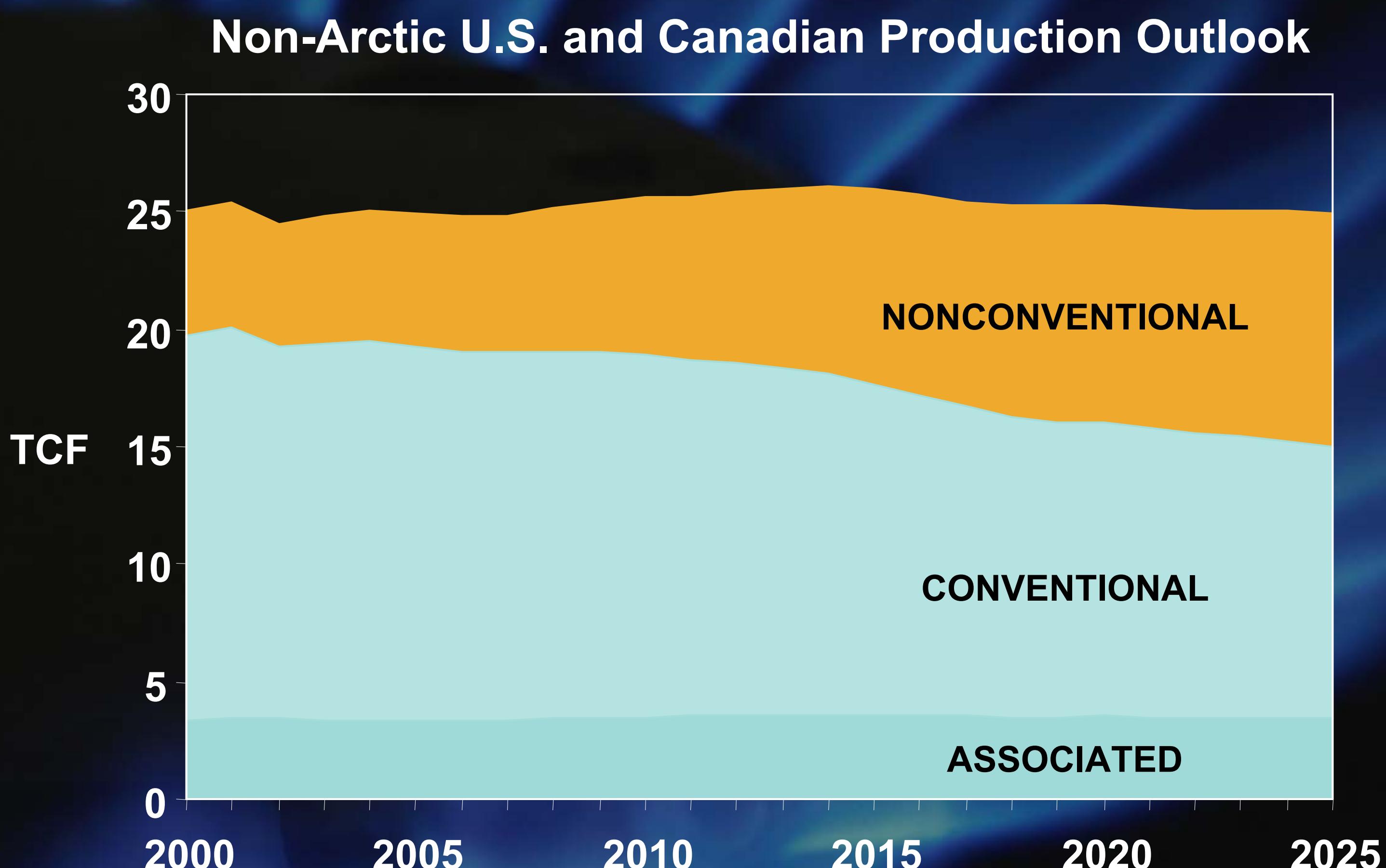

NPC

# Future Production Requires Extensive Drilling



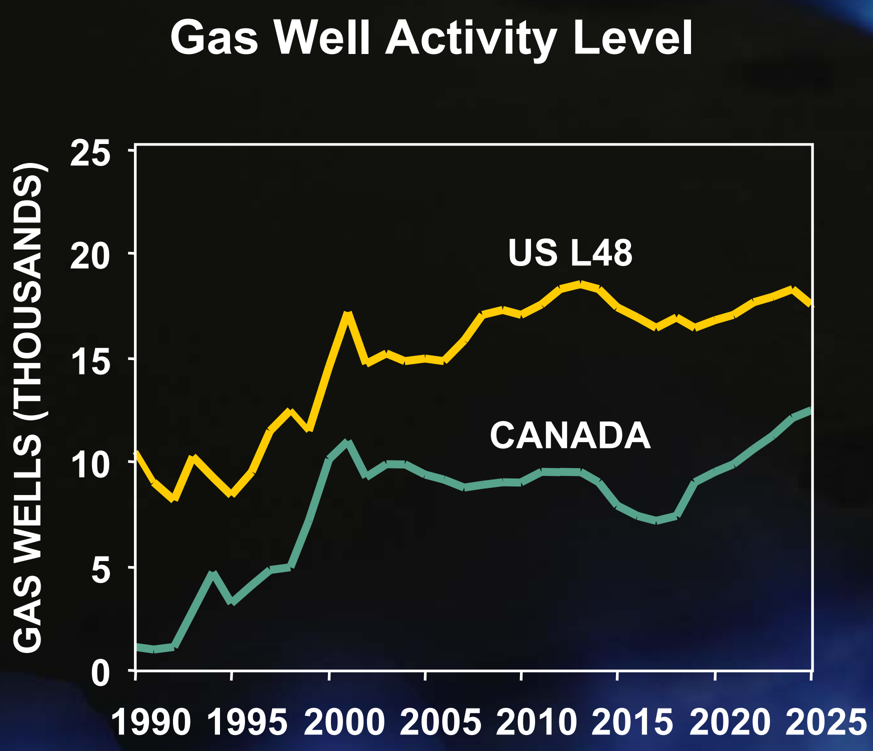

NPC

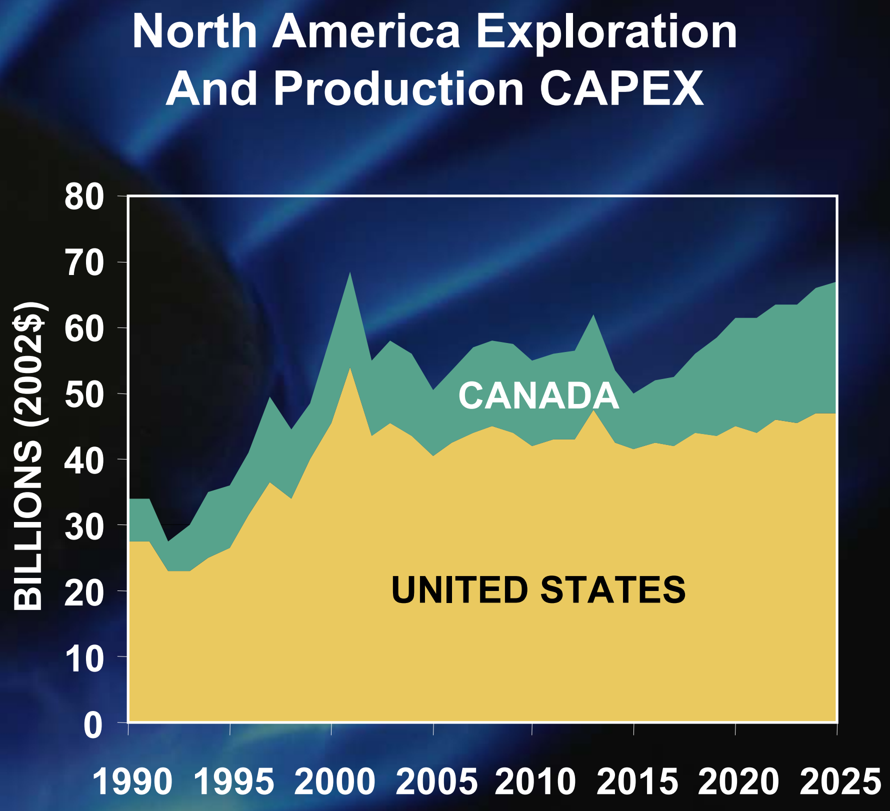
# Nonconventional Production Must Grow




NPC

# Drilling Activity and Capital Investments Must Continue at High Levels

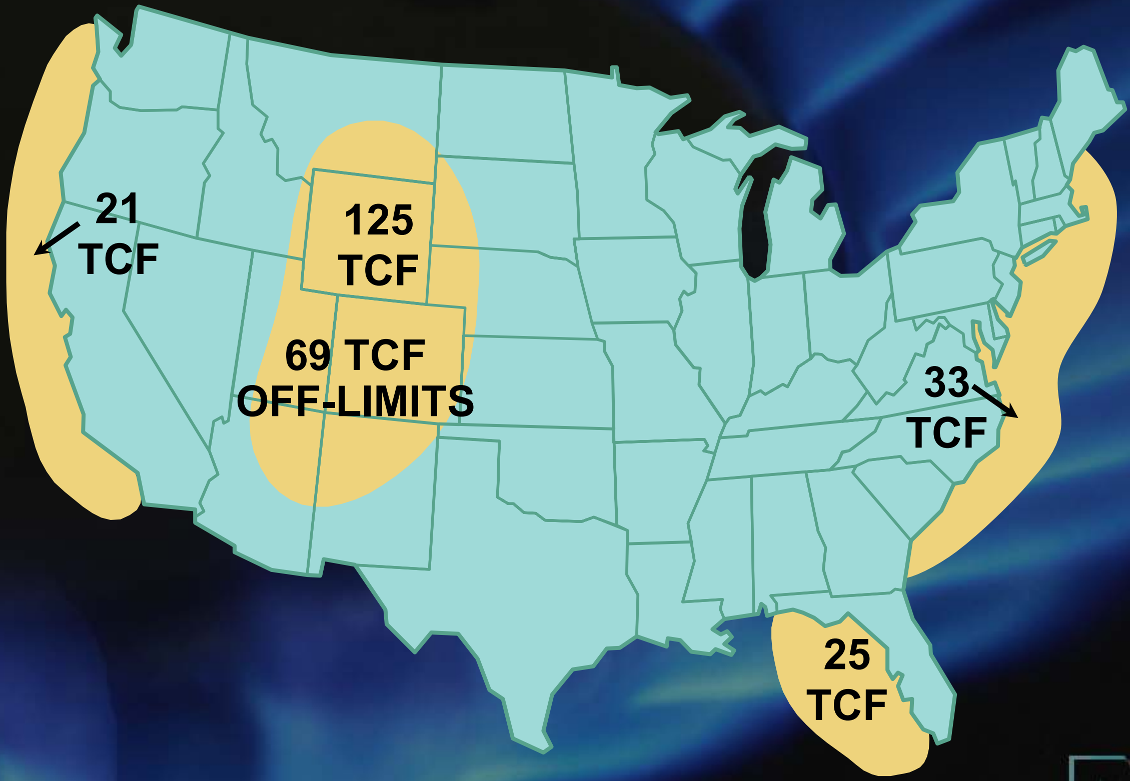



NPC

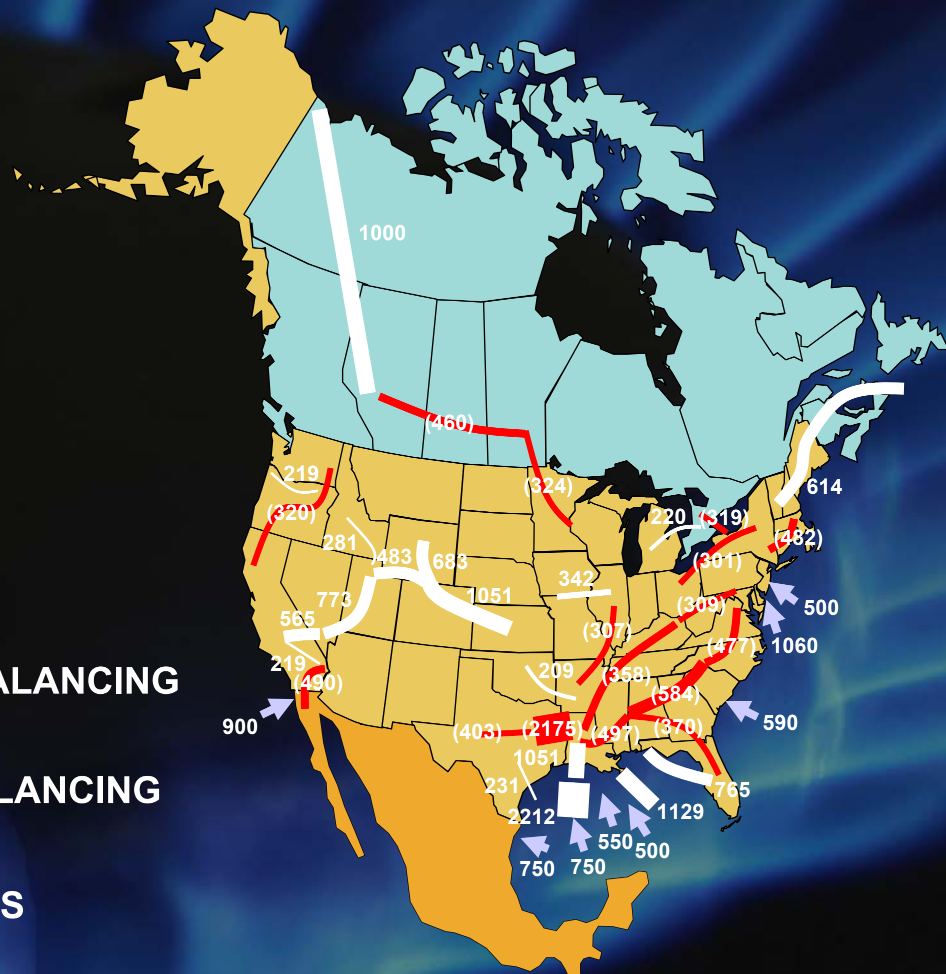
# Indigenous Resources Are Not Fully Utilized

## Technical Resource Impacted by Access Restrictions




NPC

# Flow Will Vary Significantly Through the Study Period (2003-2010)



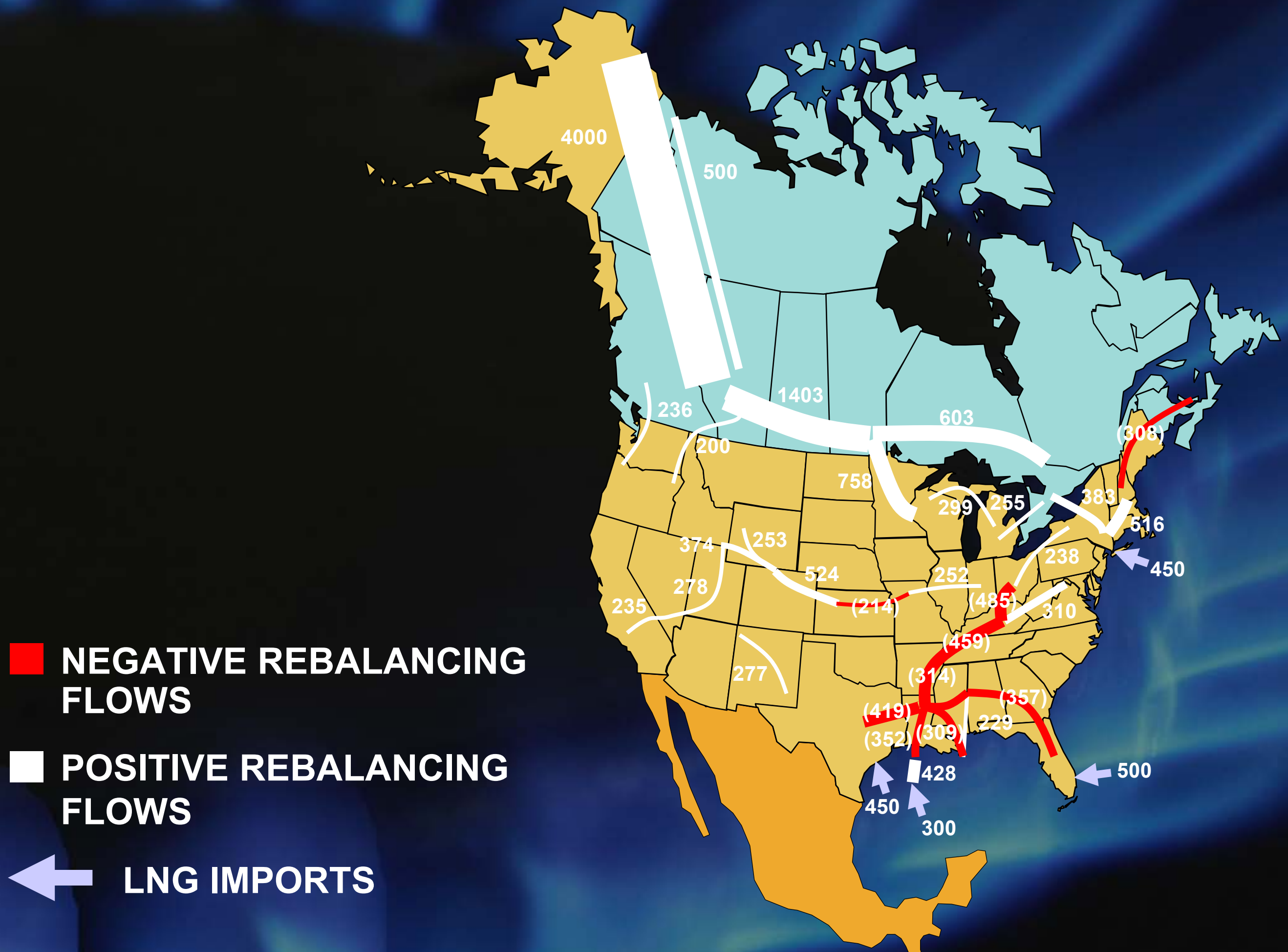

NEGATIVE REBALANCING FLOWS

POSITIVE REBALANCING FLOWS

LNG IMPORTS

NPC

# Flow Will Vary Significantly Through the Study Period (2011 to 2015)




NPC

# Flow Will Vary Significantly Through the Study Period (2016 to 2025)


NEGATIVE REBALANCING FLOWS

POSITIVE REBALANCING FLOWS

LNG IMPORTS